

Docket No. TD-166

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended): A method for generating antialiased lines in a computer graphics system, comprising the actions of:
for each respective line, determining which of a plurality of orientation classes that entire line falls into; and
performing subpixel sampling using one of a plurality of multi-point sampling patterns, in dependence on which of said plurality of orientation classes that line falls into;
displaying at least one of the respective lines.
2. (original): The method of claim 1, wherein said classes consist of x-major and y-major.
3. (original): The method of claim 1, wherein said orientation classes correspond one-to-one to said sampling patterns.
4. (canceled)

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5. (Currently Amended) A method for antialiased rendering in a computer graphics system, comprising the actions of:

- (a) identifying, for at least one respective entire line, which one of a limited number of directions is most nearly parallel to said line; and
- (b) performing subpixel sampling on said line with a subpixel multi-point sampling pattern which has maximal resolution approximately normal to said one direction;
- (c) displaying said line.

6. (original): The method of claim 5, wherein said number of directions is two.

7. (original): A graphics processor which is configured to implement the method of claim 1.

8. (original): A graphics processor which is configured to implement the method of claim 5.

9. (previously presented): The method of claim 2, wherein said classification of x-major and y-major depends on whether the x or y extent of the line is larger.

10. (previously presented): The method of claim 1, wherein said sampling patterns have the same number of sub-pixel sampling points.

11. (previously presented): The method of claim 1, wherein said sampling patterns have four sub-pixel sampling points.

12. (previously presented): The method of claim 5, wherein said sampling pattern has four sub-pixel sampling points.

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13. (Previously presented) A computer graphics system for generating antialiased lines comprising:

means for determining which of a plurality of orientation classes an entire line falls into; and

means for performing subpixel sampling using one of a plurality of multi-point sampling patterns, in dependence on which of said plurality of orientation classes that line falls into.

14. (previously presented): The system of claim 13, wherein said classes consist of x-major and y-major.

15. (previously presented): The system of claim 14, wherein said classification of x-major and y-major depends on whether the x or y extent of the line is larger.

16. (previously presented): The system of claim 13, wherein said orientation classes correspond one-to-one to said sampling patterns.

17. (previously presented): The system of claim 13, wherein said sampling patterns have the same number of sub-pixel sampling points.

18. (previously presented): The system of claim 13, wherein said sampling patterns have four sub-pixel sampling points.

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19. (Previously presented) A computer graphics system for generating antialiased lines comprising:

means for identifying, for all of at least one respective line, which one of a limited number of directions is most nearly parallel to said line; and

means for performing subpixel sampling on said line with a subpixel multi-point sampling pattern which has maximal resolution approximately normal to said one direction.

20. (previously presented): The system of claim 19, wherein said number of directions is two.

21. (previously presented): The system of claim 19, wherein said sampling pattern has four sub-pixel sampling points.

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22. (Currently Amended) A method for generating antialiased lines in a computer graphics system, comprising the steps of for each respective line:
determining which of a plurality of orientation classes that entire line falls into; and
performing subpixel sampling using one of a plurality of multi-point sampling patterns, in dependence on which of said plurality of orientation classes that line falls into;
displaying at least one of the respective lines.
23. (previously presented): The method of claim 22, wherein said classes consist of x-major and y-major.
24. (previously presented): The method of claim 23, wherein said classification of x-major and y-major depends on whether the x or y extent of the line is larger.
25. (previously presented): The method of claim 22, wherein said orientation classes correspond one-to-one to said sampling patterns.
26. (previously presented): The method of claim 22, wherein said sampling patterns have the same number of sub-pixel sampling points.
27. (previously presented): The method of claim 22, wherein said sampling patterns have four sub-pixel sampling points.

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28. (Previously presented) A method for generating antialiased lines, comprising the steps of:

identifying, for at least one respective entire line, which one of a limited number of directions is most nearly parallel to said line; and
performing subpixel sampling on said line with a subpixel multi-point sampling pattern which has maximal resolution approximately normal to said one direction.

29. (previously presented): The method of claim 28, wherein said number of directions is two.

30. (previously presented): The method of claim 28, wherein said sampling pattern has four sub-pixel sampling points.